



July 1, 2003 Project #02148-001

Mr. Walter Guigenhiemer USEPA Region IX 75 Hawthorne Street San Francisco, California 94105

Phone (415) 744-3377 Fax (415) 947-3530

Re: SITE INVESTIGATION AND GROUNDWATER SAMPLING AT BOND SERVICE STATION

Dear Mr. Guigenhiemer:

Enclosed, please find the report entitled *Site Investigation and Groundwater Sampling* for the Bond Service Station located in Shiprock, New Mexico.

This report includes the laboratory analyses for four (4) monitor wells sampled on June 16, 2003.

If you have any questions or need additional information, please do not hesitate to contact me at (505) 632-0615.

Respectfully Submitted, **ENVIROTECH INC.**

Landrea Jackson

Environmental Administrative Assistant

ljackson@envirotech-inc.com

Enclosure

Sampling Report

Cc:

Mr. Charles Foutz

File #02148

CJC\tcr\F:/Projects/PST/Bond&Bond/coverltr

SITE INVESTIGATION AND GROUNDWATER SAMPLING

AT

BOND SERVICE STATION SHIPROCK, NEW MEXICO

PROJECT #02148-001

June 2003

SITE INVESTIGATION AND GROUNDWATER SAMPLING

SITE NAME:

BOND SERVICE STATION SHIPROCK, NEW MEXICO

SUBMITTED TO:

MR. WALTER GUIGENHIEMER
USEPA REGION IX
75 HAWTHORNE STREET
SAN FRANCISCO, CALIFORNIA 94105
(415) 744-3377

SUBMITTED FOR:

MR. CHARLES FOUTZ
BOND & BOND TRUE VALUE HARDWARE
P.O. BOX 640
SHIPROCK, NEW MEXICO 87420
(505) 860-5885

SUBMITTED BY:

Envirotech Inc. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615

PROJECT #0202148-001

June 2003

Site Investigation and Groundwater Sampling At Bond Service Station

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June 30, 2003

Project #02148-001

Mr. Walter Guigenhiemer USEPA Region 9 75 Hawthorne Street San Francisco, California 94105

Phone (415) 744-3377 Fax (415) 947-3530

RE: SITE INVESTIGATION AND SAMPLING AT THE BOND SERVICE STATION

Dear Mr. Guigenhiemer

Envirotech Inc. conducted ground water sampling and investigation activities on June 16, 2003 using the existing groundwater monitoring system located at the former Bond & Bond Service Station see *Figure 1, Vicinity Map*. The site is located in the town of Shiprock, NM on U.S. Highway 64 and is located on the Navajo Nation Indian Reservation.

This site originally had the underground storage tanks removed by Envirotech in early 1993. A follow up site investigation including soil borings and monitor well installation found shallow soil contamination from the UST's but no ground water contamination was found in the eight (8) monitor wells that were installed. Only one ground water sampling event took place during this early investigation.

The operator of the site, Mr. Charles Foutz, contracted Envirotech, to do a follow up investigation as required by the United States Environmental Protection Agency (USEPA). The work included locating, sampling and reporting on the eight (8) original monitor wells.

Envirotech was able to locate seven (7) of the original eight (8) monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7). Four (4) of the located were surveyed (MW-1, MW-4, MW-5 and MW-6); see *Figure 2, Site Map*. Three (3) of the seven (7) monitor wells were dry (MW-2, MW-3, and MW-7). Water level data is summarized in *Table 1, Water Level Measurements* and contoured on *Figure 3, Water Level Map*. The four (4) monitor wells were sampled per SW-860 protocol. These samples were analyzed per USEPA method 8260 for volatile organic compounds. Two (2) of the wells, MW-5 and MW-6, had detectable BTEX values, but were well below USEPA water quality standards. Three (3) of the wells (MW-1, MW-5, MW-6) had detectable amounts of total naphthalenes; see *Table 2, Laboratory Results of the Groundwater Sample Analysis* and *Appendix A, Laboratory Analysis and Field Notes*.

Monitor well MW-1 was also noted to have a slight sheen and strong diesel odor when sampled, but did not have a measurable free product thickness.

No other contamination was noted. The ground water gradient is to the south-southwest and is similar to what it was during the previous investigation, approximately ten (10) years ago. The water table is two (2) to three (3) feet lower than past measurements, resulting in a much steeper gradient of 0.0167 ft/ft.

The dry wells in the northern and northeastern part of the site are directly related to the lowering of the water table. These wells were only ten (10) feet deep when originally drilled and the water table is now projected to be slightly below the bottom of the wells.

In summary, seven (7) of the original eight (8) wells were relocated. Four (4) of these were found to have sufficient water to be sampled. None of the wells were found to exceed the USEP water quality standards. Our interpretation of these results is the groundwater has not been significantly impacted by the former UST's. Any remaining contamination is being self-remediated by natural attenuation. We recommend additional monitoring to confirm this interpretation.

If you have any questions or if we can provide any additional information, please contact our office at (505) 632-0615.

Respectfully Submitted:

ENVIROTECH INC.

Kyle Kerr

Environmental Scientist

NMCES#299

kpkerr@envirotech-inc.com

Reviewed by:

Jack Collins, P.G. #1822

Chief Environmental Scientist/Hydrogeologist

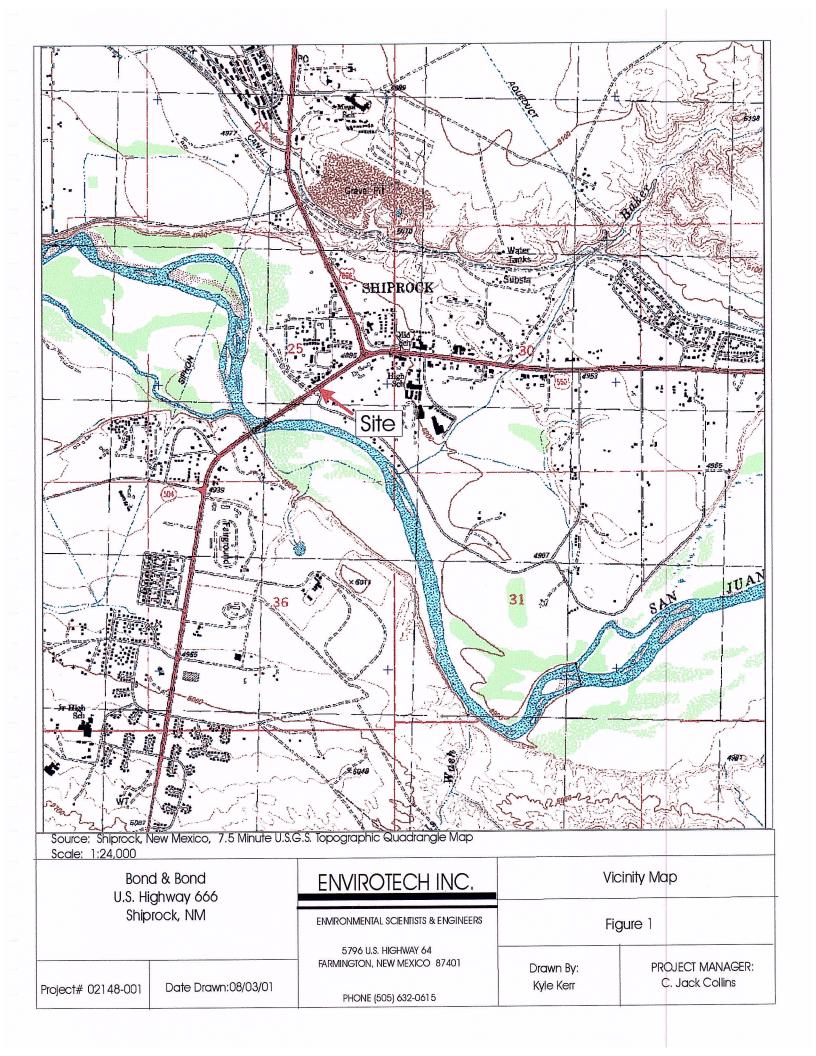
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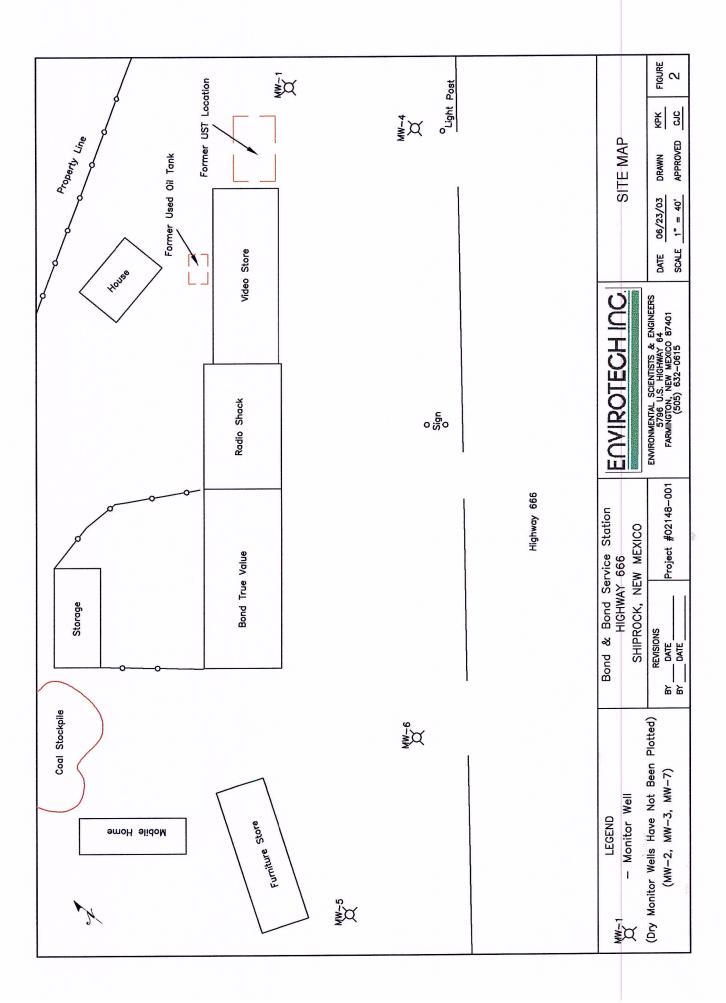
jcollins@envirotech-inc.com

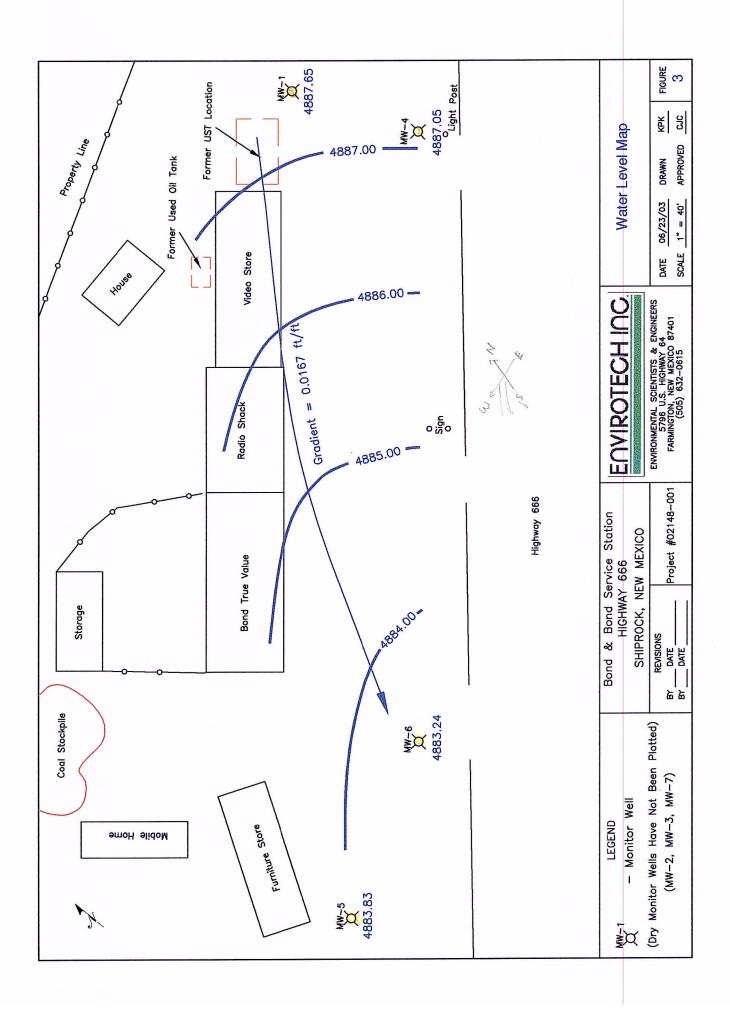
Morris D. Young

President

myoung@envirotech-inc.com







Bond & Bond Service Station June 16, 2003 02148-001 Site Name

Project # Date

Table 1 Water Level Measurements

Well#	Date of	Top of Casing	Depth to	Total	Water
	Measurement	Elevation	Water	Depth	Elevation
		(feet)	(feet)	(feet)	(feet)
MW-1	06/16/03	4899.00	11.35	13.90	4887.65
MW-4	06/16/03	4898.01	10.96	12.65	4887.05
MW-5	06/16/03	4895.73	11.90	14.30	4883.83
9-MM	06/16/03	4893.87	10.63	13.15	4883.24

Bond & Bond Service Station June 16, 2003 02148-001 Site Name Project # Date

Table 2
Laboratory Results of Groundwater Sample Analyses

USEPA Standards	dards	5	1,000	700	10,000		
Well #	Sample				ppb(ug/L)		
	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Naphthalene
MW-1	06/16/03	<1.0	<1.0	<1.0	<1.0	<1.0	32.14
		,					
MW-4	06/16/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	06/16/03	<1.0	<1.0	1.74	1.90	3.64	1.04
9-MM	06/16/03	1.38	<1.0	1.86	<1.0	3.24	10.29



Client: Bond & Bond Project #: 02148-001 Sample ID: MW - 1 Date Reported: 06-17-03 Chain of Custody: 11026 Date Sampled: 06-16-03 Laboratory Number: 25915 Date Received: 06-16-03 Sample Matrix: Water Date Analyzed: 06-17-03 Preservative: Cool Analysis Requested: 8260 VOC

Condition: Cool and Intact

	Concentration		Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
Benzene	ND	(ug/ L)	1.0	1
Toluene	ND	(ug/L)	1.0	1
Ethylbenzene	ND	(ug/L)	1.0	1
Xylenes, Total	ND	(ug/L)	1.0	1
Methyl tert-butyl ether (MTBE)	ND	(ug/ L)	1.0	1
1,2,4-Trimethylbenzene	5.33	(ug/ L)	1.0	1
1,3,5-Trimethylbenzene	5.65	(ug/L)	1.0	1
1,2-Dichloroethane (EDC)	ND	(ug/L)	1.0	1
1,2-Dibromoethane (EDB)	ND	(ug/L)	1.0	1
Napthalene	8.21	(ug/ L)	1.0	1
1-Methylnapthalene	14.2	(ug/L)	2.0	1
2-Methylnapthalene	9.73	(ug/L)	2.0	1
Bromobenzene	ND	(ug/L)	1.0	1
Bromochloromethane	ND	(ug/L)	1.0	1
Bromodichloromethane	ND	(ug/L)	1.0	1
Bromoform	ND	(ug/L)	1.0	1
Bromomethane	ND	(ug/L)	1.0	1
Carbon Tetrachloride	ND	(ug/L)	1.0	1
Chlorobenzene	ND	(ug/L)	1.0	1
Chloroethane	ND	(ug/L)	2.0	1
Chloroform	ND	(ug/L)	1.0	1
Chloromethane	ND	(ug/L)	1.0	1
2-Chlorotoluene	ND	(ug/L)	1.0	1
4-Chlorotoluene	ND	(ug/L)	1.0	1
cis-1,2-Dichloroethene	ND	(ug/L)	1.0	1
cis-1,3-Dichloropropene	ND	(ug/L)	1.0	1
1,2-Dibromo-3-chloropropane	ND	(ug/L)	2.0	1
Dibromochloromethane	ND	(ug/L)	1.0	1
Dibromoethane	ND	(ug/L)	2.0	1
1,2-Dichlorobenzene	ND	(ug/L)	1.0	1
1,3-Dichlorobenzene	ND	(ug/L)	1.0	1
1,4-Dichlorobenzene	ND	(ug/L)	1.0	1
Dichlorodifluoromethane	ND	(ug/L)	1.0	1
1,1-Dichloroethane	ND	(ug/L)	1.0	1
1,1-Dichloroethene	ND	(ug/L)	1.0	1
1,2-Dichloropropane	ND	(ug/L)	1.0	1
1,3-Dichloropropane	ND	(ug/L)	1.0	1
2,2-Dichloropropane	ND	(ug/L)	1.0	1



Client:

Bond & Bond

Sample ID:

MW - 1

Laboratory Number:

25915

page 2

	Concentratio	n	Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
1,1-Dichloropropene	ND	(ug/L)	1.0	1
Hexachlorobutadiene	ND	(ug/ L)	1.0	1
Isopropylbenzene	48.4	(ug/L)	1.0	1
4-Isopropyltoluene	16.5	(ug/L)	1.0	1
Methylene Chloride	ND	(ug/L)	3.0	1
n-Butylbenzene	ND	(ug/L)	1.0	1
n-Propylbenzene	74.4	(ug/L)	1.0	1
sec-Butylbenzene	128	(ug/L)	1.0	1
Styrene	ND	(ug/L)	1.0	1
tert-Butylbenzene	20.0	(ug/L)	1.0	1
Tetrachloroethene (PCE)	ND	(ug/L)	1.0	1
1,1,1,2-Tetrachloroethane	ND	(ug/L)	1.0	1
1,1,2,2-Tetrachloroethane	ND	(ug/L)	1.0	1
trans-1,2-Dichloroethene	ND	(ug/L)	1.0	1
trans-1,3-Dichloropropene	ND	(ug/L)	1.0	1
Trichloroethene (TCE)	ND	(ug/L)	1.0	1
Trichlorofluoromethane	ND	(ug/L)	1.0	1
1,2,3-Trichlorobenzene	ND	(ug/L)	1.0	1
1,2,4-Trichlorobenzene	ND	(ug/L)	1.0	1
1,1,1-Trichloroethane	ND	(ug/L)	1.0	1
1,1,2-Trichloroethane	ND	(ug/L)	1.0	1
1,2,3-Trichloropropane	ND	(ug/L)	2.0	1
Vinyl Chloride	ND	(ug/L)	2.0	1
Surrogates:			Rec. Limits	
Dibromofluoromethane	98.5	% Recovery	78.6-115	1
1,2-Dichloroethane-d4	97.6	% Recovery	74.6-123	1

ND = Parameter not detected at the stated detection limit.

References:

Toluene-d8

4-Bromofluorobenzene

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass

Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

99.5

97.7

Comments:

Shiprock, NM.

Analyst

Review

% Recovery

% Recovery

84.2-115

78.6-115



Client: Bond & Bond Project #: 02148-001 Sample ID: MW - 4 Date Reported: 06-17-03 Chain of Custody: 11026 Date Sampled: 06-16-03 Laboratory Number: 25916 Date Received: 06-16-03 Sample Matrix: Water Date Analyzed: 06-17-03 Preservative: Cool Analysis Requested: 8260 VOC

Condition: Cool and Intact

	Concentration		Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
Benzene	ND	(ug/L)	1.0	1
Toluene	ND	(ug/L)	1.0	1
Ethylbenzene	ND	(ug/L)	1.0	1
Xylenes, Total	ND	(ug/L)	1.0	1
Methyl tert-butyl ether (MTBE)	ND	(ug/L)	1.0	1
1,2,4-Trimethylbenzene	ND	(ug/L)	1.0	1
1,3,5-Trimethylbenzene	ND	(ug/L)	1.0	1
1,2-Dichloroethane (EDC)	ND	(ug/L)	1.0	1
1,2-Dibromoethane (EDB)	ND	(ug/L)	1.0	1
Napthalene	ND	(ug/L)	1.0	1
1-Methylnapthalene	ND	(ug/L)	2.0	1
2-Methylnapthalene	ND	(ug/L)	2.0	1
Bromobenzene	ND	(ug/L)	1.0	1
Bromochloromethane	ND	(ug/L)	1.0	1
Bromodichloromethane	ND	(ug/L)	1.0	1
Bromoform	ND	(ug/L)	1.0	1
Bromomethane	ND	(ug/L)	1.0	1
Carbon Tetrachloride	ND	(ug/L)	1.0	1
Chlorobenzene	ND	(ug/L)	1.0	1
Chloroethane	ND	(ug/L)	2.0	1
Chloroform	ND	(ug/L)	1.0	1
Chloromethane	ND	(ug/L)	1.0	1
2-Chlorotoluene	ND	(ug/L)	1.0	1
4-Chlorotoluene	ND	(ug/L)	1.0	1
cis-1,2-Dichloroethene	ND	(ug/L)	1.0	1
cis-1,3-Dichloropropene	ND	(ug/ L)	1.0	1
1,2-Dibromo-3-chloropropane	ND	(ug/L)	2.0	1
Dibromochloromethane	ND	(ug/L)	1.0	1
Dibromoethane	ND	(ug/L)	2.0	1
1,2-Dichlorobenzene	ND	(ug/L)	1.0	1
1,3-Dichlorobenzene	ND	(ug/L)	1.0	1
1,4-Dichlorobenzene	ND	(ug/L)	1.0	1
Dichlorodifluoromethane	ND	(ug/L)	1.0	1
1,1-Dichloroethane	ND	(ug/L)	1.0	1
1,1-Dichloroethene	ND	(ug/L)	1.0	1
1,2-Dichloropropane	ND	(ug/L)	1.0	1
1,3-Dichloropropane	ND	(ug/L)	1.0	1
2,2-Dichloropropane	ND	(ug/L)	1.0	1



Client: Bond & Bond Sample ID: MW - 4

Laboratory Number: 25916 page 2

Laboratory Number: 25916				
	Concentration		Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
1,1-Dichloroprop	ND	(ug/L)	1.0	1
Hexachlorobutad \ N) o FG.c/9 Qat	S ND	(ug/L)	1.0	1
Isopropylbenzene	ND	(ug/L)	1.0	1
4-Isopropyltoluen qiven for	ND	(ug/L)	1.0	1
Methylene Chloric	v ND	(ug/L)	3.0	1
n-Butylbenzene These 0000 mesti	ND	(ug/L)	1.0	1
1,1-Dichloroprop Hexachlorobutad N official dat Isopropylbenzene 4-Isopropyltoluen Methylene Chloric n-Butylbenzene n-Propylbenzene sec-Butylbenzene 1,1-Dichloroprop N official dat No	ND	(ug/L)	1.0	1
sec-Butylbenzene	ND	(ug/L)	1.0	1
Styrene	ND	(ug/L)	1.0	1
tert-Butylbenzene	ND	(ug/L)	1.0	1
Tetrachloroethene (PCE)	ND	(ug/L)	1.0	1
1,1,1,2-Tetrachloroethane	ND	(ug/L)	1.0	1
1,1,2,2-Tetrachloroethane	ND	(ug/L)	1.0	1
trans-1,2-Dichloroethene	ND	(ug/L)	1.0	1
trans-1,3-Dichloropropene	ND	(ug/L)	1.0	1
Trichloroethene (TCE)	ND	(ug/L)	1.0	1
Trichlorofluoromethane	ND	(ug/L)	1.0	1
1,2,3-Trichlorobenzene	ND	(ug/L)	1.0	1
1,2,4-Trichlorobenzene	ND	(ug/ L)	1.0	1
1,1,1-Trichloroethane	ND	(ug/ L)	1.0	1
1,1,2-Trichloroethane	ND	(ug/ L)	1.0	1
1,2,3-Trichloropropane	ND	(ug/L)	2.0	1
Vinyl Chloride	ND	(ug/L)	2.0	1
Surrogates:			Rec. Limits	
Dibromofluoromethane	93.0	% Recovery	78.6-115	1
1,2-Dichloroethane-d4	97.2	% Recovery	74.6-123	1
Toluene-d8	99.0	% Recovery	84.2-115	1

ND = Parameter not detected at the stated detection limit.

References:

4-Bromofluorobenzene

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass

97.5

% Recovery

Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Comments:

Shiprock, NM.

Analyst

Mistine of Walters

78.6-115



Client: Bond & Bond
Sample ID: MW - 5
Chain of Custody: 11026
Laboratory Number: 25917
Sample Matrix: Water
Preservative: Cool

Project #:
Date Reported:
Date Sampled:
Date Received:
Date Analyzed:
Analysis Requested:

02148-001 06-17-03 06-16-03 06-16-03 06-17-03 8260 VOC

Condition: Cool and Intact

	Concentration		Det.	Dilution	
Parameter	(ug/L)	Units	Limit	Factor	
Benzene	ND	(ug/L)	1.0	1	
Toluene	ND	(ug/L)	1.0	1	
Ethylbenzene	1.74	(ug/L)	1.0	1	
Xylenes, Total	1.90	(ug/L)	1.0	1	
Methyl tert-butyl ether (MTBE)	ND	(ug/L)	1.0	1	
1,2,4-Trimethylbenzene	1.23	(ug/L)	1.0	1	
1,3,5-Trimethylbenzene	2.00	(ug/L)	1.0	1	
1,2-Dichloroethane (EDC)	ND	(ug/L)	1.0	1	
1,2-Dibromoethane (EDB)	ND	(ug/L)	1.0	1	
Napthalene	1.04	(ug/L)	1.0	1	
1-Methylnapthalene	ND	(ug/L)	2.0	1	
2-Methylnapthalene	ND	(ug/L)	2.0	1	
Bromobenzene	ND	(ug/L)	1.0	1	
Bromochloromethane	ND	(ug/L)	1.0	1	
3romodichloromethane	ND	(ug/L)	1.0	1	
Bromoform	ND	(ug/L)	1.0	1	
3romomethane	ND	(ug/L)	1.0	1	
Carbon Tetrachloride	ND	(ug/L)	1.0	1	
Chlorobenzene	ND	(ug/L)	1.0	1	
Chloroethane	ND	(ug/L)	2.0	1	
Chloroform	ND	(ug/L)	1.0	1	
Chloromethane	ND	(ug/L)	1.0	1	
2-Chlorotoluene	ND	(ug/L)	1.0	1	
I-Chlorotoluene	ND	(ug/L)	1.0	1	
is-1,2-Dichloroethene	ND	(ug/L)	1.0	1	
cis-1,3-Dichloropropene	ND	(ug/L)	1.0	1	
I,2-Dibromo-3-chloropropane	ND	(ug/L)	2.0	1	
Dibromochloromethane	ND	(ug/L)	1.0	1	
Dibromoethane	ND	(ug/L)	2.0	1	
I,2-Dichlorobenzene	ND	(ug/L)	1.0	1	
,3-Dichlorobenzene	ND	(ug/L)	1.0	1	
,4-Dichlorobenzene	ND	(ug/L)	1.0	1	
Dichlorodifluoromethane	ND	(ug/L)	1.0	1	
,1-Dichloroethane	ND	(ug/L)	1.0	1	
I,1-Dichloroethene	ND	(ug/L)	1.0	1	
1,2-Dichloropropane	ND	(u g/L)	1.0	1	
1,3-Dichloropropane	ND	(ug/L)	1.0	1	
2,2-Dichloropropane	ND	(ug/L)	1.0	1	



Client: Bond & Bond

Sample ID: MW - 5 page 2

				pago =
Laboratory Number: 25917				
	Concentratio	n	Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
1,1-Dichloropropene	ND	(ua/L)	1.0	4
Hexachlorobutadiene	ND ND	(ug/L)		1
Isopropylbenzene		(ug/L)	1.0	1
	ND	(ug/L)	1.0	1
4-Isopropyltoluene	ND	(ug/L)	1.0	1
Methylene Chloride	ND	(ug/L)	3.0	1
n-Butylbenzene	ND	(ug/L)	1.0	1
n-Propylbenzene	ND	(ug/L)	1.0	1
sec-Butylbenzene	ND	(ug/L)	1.0	1
Styrene	ND	(ug/L)	1.0	1
tert-Butylbenzene	ND	(ug/L)	1.0	1
Tetrachloroethene (PCE)	ND	(ug/L)	1.0	1
1,1,1,2-Tetrachloroethane	ND	(ug/L)	1.0	1
1,1,2,2-Tetrachloroethane	ND	(ug/L)	1.0	1
trans-1,2-Dichloroethene	ND	(ug/L)	1.0	1
trans-1,3-Dichloropropene	ND	(ug/L)	1.0	1
Trichloroethene (TCE)	ND	(ug/L)	1.0	1
Trichlorofluoromethane	ND	(ug/L)	1.0	1
1,2,3-Trichlorobenzene	ND	(ug/L)	1.0	1
1,2,4-Trichlorobenzene	ND	(ug/L)	1.0	1
1,1,1-Trichloroethane	ND	(ug/L)	1.0	1
1,1,2-Trichloroethane	ND	(ug/L)	1.0	1
1,2,3-Trichloropropane	ND	(ug/L)	2.0	1
Vinyl Chloride	ND	(ug/L)	2.0	1
Surrogates:		****	Rec. Limits	
Dibromofluoromethane	93.0	% Recovery	78 6-115	1

Surrogates:			Rec. Limits	
Dibromofluoromethane	93.0	% Recovery	78.6-115	1
1,2-Dichloroethane-d4	97.2	% Recovery	74.6-123	1
Toluene-d8	99.0	% Recovery	84.2-115	1
4-Bromofluorobenzene	97.5	% Recovery	78.6-115	1

ND = Parameter not detected at the stated detection limit.

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Comments: Shiprock, NM.

Analyst

Pristine of Walters



Client: Sample ID: Bond & Bond

MW - 6

Chain of Custody:

11026

Laboratory Number:

25918

Sample Matrix: Preservative:

Water Cool

Condition:

Cool and Intact

Project #:

Date Reported:

ted:

Date Sampled:

Date Received: Date Analyzed:

Analysis Requested:

02148-001 06-17-03

06-16-03

06-16-03 06-17-03

8260 VOC

	Concentration		Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
3enzene	1.38	(ug/L)	1.0	1
Toluene	ND	(ug/L)	1.0	1
Ethylbenzene	1.86	(ug/L)	1.0	1
Kylenes, Total	ND	(ug/L)	1.0	1
Methyl tert-butyl ether (MTBE)	ND	(ug/L)	1.0	1
I,2,4-Trimethylbenzene	ND	(ug/L)	1.0	1
,3,5-Trimethylbenzene	ND	(ug/L)	1.0	1
,2-Dichloroethane (EDC)	ND	(ug/L)	1.0	1
,2-Dibromoethane (EDB)	ND	(ug/L)	1.0	1
lapthalene ,	3.93	(ug/L)	1.0	1
-Methylnapthalene	2.75	(ug/L)	2.0	1
-Methylnapthalene	3.61	(ug/L)	2.0	1
Bromobenzene	ND	(ug/L)	1.0	1
Bromochloromethane	ND	(ug/L)	1.0	1
Bromodichloromethane	ND	(ug/L)	1.0	1
Bromoform	ND	(ug/L)	1.0	1
Sromomethane	ND	(ug/L)	1.0	1
arbon Tetrachloride	ND	(ug/L)	1.0	1
Chlorobenzene	ND	(ug/L)	1.0	1
Chloroethane	ND	(ug/L)	2.0	1
Chloroform	ND	(ug/L)	1.0	1
Chloromethane	ND	(ug/L)	1.0	1
-Chlorotoluene	ND	(ug/L)	1.0	1
-Chlorotoluene	ND	(ug/L)	1.0	1
is-1,2-Dichloroethene	ND	(ug/ L)	1.0	1
is-1,3-Dichloropropene	ND	(ug/L)	1.0	1
,2-Dibromo-3-chloropropane	ND	(ug/L)	2.0	1
ibromochloromethane	ND	(ug/L)	1.0	1
ibromoethane	ND	(ug/L)	2.0	1
,2-Dichlorobenzene	ND	(ug/L)	1.0	1
,3-Dichlorobenzene	ND	(ug/L)	1.0	1
,4-Dichlorobenzene	ND	(ug/L)	1.0	1
ichlorodifluoromethane	ND	(ug/L)	1.0	1
,1-Dichloroethane	ND	(ug/ L)	1.0	1
,1-Dichloroethene	ND	(ug/L)	1.0	1
,2-Dichloropropane	ND	(ug/L)	1.0	1
,3-Dichloropropane	ND	(ug/L)	1.0	1
,2-Dichloropropane	ND	(ug/L)	1.0	1



Client: Bond & Bond Sample ID: MW - 6

Laboratory Number: 25918

page 2

	Concentration	า	Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
1,1-Dichloropropene	ND	(ug/L)	1.0	1
Hexachlorobutadiene	ND	(ug/L)	1.0	1
Isopropylbenzene	ND	(ug/L)	1.0	1
4-Isopropyltoluene	ND	(ug/L)	1.0	1
Methylene Chloride	ND	(ug/L)	3.0	1
n-Butylbenzene	ND	(ug/L)	1.0	1
n-Propylbenzene	ND	(ug/L)	1.0	1
sec-Butylbenzene	ND	(ug/L)	1.0	1
Styrene	ND	(ug/L)	1.0	1
tert-Butylbenzene	ND	(ug/L)	1.0	1
Tetrachloroethene (PCE)	ND	(ug/L)	1.0	1
1,1,1,2-Tetrachloroethane	ND	(ug/L)	1.0	1
1,1,2,2-Tetrachloroethane	ND	(ug/L)	1.0	1
trans-1,2-Dichloroethene	ND	(ug/L)	1.0	1
trans-1,3-Dichloropropene	ND	(ug/L)	1.0	1
Trichloroethene (TCE)	ND	(ug/L)	1.0	1
Trichlorofluoromethane	ND	(ug/L)	1.0	1
1,2,3-Trichlorobenzene	ND	(ug/L)	1.0	1
1,2,4-Trichlorobenzene	ND	(ug/L)	1.0	1
1,1,1-Trichloroethane	ND	(ug/L)	1.0	1
1,1,2-Trichloroethane	ND	(ug/L)	1.0	1
1,2,3-Trichloropropane	ND	(ug/L)	2.0	1
Vinyl Chloride	ND	(ug/L)	2.0	1
Surrogates:			Rec. Limits	
Dibromofluoromethane	90.1	% Recovery	78.6-115	1
1,2-Dichloroethane-d4	92.7	% Recovery	74.6-123	1

ND = Parameter not detected at the stated detection limit.

References:

Toluene-d8

4-Bromofluorobenzene

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

93.4

93.5

% Recovery

% Recovery

Comments:

Shiprock, NM.

Analyst

Mistare of Wallers
Review

84.2-115

78.6-115

1

1



QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



Client: Sample ID: QA/QC

Laboratory Blank

Laboratory Number:

06-17 VOA

Sample Matrix: Preservative:

Water

Condition:

N/A N/A Project #:

Date Reported:

Date Sampled:

Date Received:

Date Analyzed: Analysis Requested: N/A

06-17-03

N/A

N/A 06-17-03

8260 VOC

	Concentration	Det.	Dilution	
Parameter	(ug/L)	Units	Limit	Factor
Benzene	ND	(ug/L)	1.0	1
Toluene	ND	(ug/L)	1.0	1
Ethylbenzene	ND	(ug/L)	1.0	1
Xylenes, Total	ND	(ug/L)	1.0	1
Methyl tert-butyl ether (MTBE)	ND	(ug/L)	1.0	1
1,2,4-Trimethylbenzene	ND	(ug/L)	1.0	1
1,3,5-Trimethylbenzene	ND	(ug/L)	1.0	1
1,2-Dichloroethane (EDC)	ND	(ug/L)	1.0	1
1,2-Dibromoethane (EDB)	ND	(ug/L)	1.0	1
Napthalene	ND	(ug/L)	1.0	1
1-Methylnapthalene	ND	(ug/L)	2.0	1
2-Methylnapthalene	ND	(ug/L)	2.0	1
Bromobenzene	ND	(ug/L)	1.0	1
Bromochloromethane	ND	(ug/L)	1.0	1
Bromodichloromethane	ND	(ug/L)	1.0	1
Bromoform	ND	(ug/L)	1.0	1
3romomethane	ND	(ug/L)	1.0	1
Carbon Tetrachloride	ND	(ug/L)	1.0	1
Chlorobenzene	ND	(ug/L)	1.0	1
Chloroethane	ND	(ug/L)	2.0	1
Chloroform	ND	(ug/L)	1.0	1
Chloromethane	ND	(ug/L)	1.0	1
2-Chlorotoluene	ND	(ug/L)	1.0	1
l-Chlorotoluene	ND	(ug/L)	1.0	1
sis-1,2-Dichloroethene	ND	(ug/L)	1.0	1
cis-1,3-Dichloropropene	ND	(ug/L)	1.0	1
I,2-Dibromo-3-chloropropane	ND	(ug/L)	2.0	1
Dibromochloromethane	ND	(ug/L)	1.0	1
Dibromoethane	ND	(ug/L)	2.0	1
1,2-Dichlorobenzene	ND	(ug/L)	1.0	1
,3-Dichlorobenzene	ND	(ug/L)	1.0	1
,4-Dichlorobenzene	ND	(ug/L)	1.0	1
Dichlorodifluoromethane	ND	(ug/L)	1.0	1
,1-Dichloroethane	ND	(ug/L)	1.0	1
,1-Dichloroethene	ND	(ug/L)	1.0	1
,2-Dichloropropane	ND	(ug/L)	1.0	1
,3-Dichloropropane	ND	(ug/L)	1.0	1
2,2-Dichloropropane	ND	(ug/L)	1.0	1



Client:

QA/QC

Sample ID:

Laboratory Blank

Laboratory Number:

06-17 VOA

page 2

	Concentration	n	Det.	Dilution
Parameter	(ug/L)	Units	Limit	Factor
1,1-Dichloropropene	ND	(ug/L)	1.0	1
Hexachlorobutadiene	ND	(ug/L)	1.0	1
Isopropylbenzene	ND	(ug/L)	1.0	1
4-Isopropyltoluene	ND	(ug/L)	1.0	1
Methylene Chloride	ND	(ug/L)	1.0	1
n-Butylbenzene	ND	(ug/L)	1.0	1
n-Propylbenzene	ND	(ug/L)	1.0	1
sec-Butylbenzene	ND	(ug/L)	1.0	1
Styrene	ND	(ug/L)	1.0	1
tert-Butylbenzene	ND	(ug/L)	1.0	1
Tetrachloroethene (PCE)	ND	(ug/L)	1.0	1
1,1,1,2-Tetrachloroethane	ND	(ug/L)	1.0	1
1,1,2,2-Tetrachloroethane	ND	(ug/L)	1.0	1
trans-1,2-Dichloroethene	ND	(ug/L)	1.0	1
trans-1,3-Dichloropropene	ND	(ug/L)	1.0	1
Trichloroethene (TCE)	ND	(ug/L)	1.0	1
Trichlorofluoromethane	ND	(ug/L)	1.0	1
1,2,3-Trichlorobenzene	ND	(ug/L)	1.0	1
1,2,4-Trichlorobenzene	ND	(ug/L)	1.0	1
1,1,1-Trichloroethane	ND	(ug/L)	1.0	1
1,1,2-Trichloroethane	ND	(ug/L)	1.0	1
1,2,3-Trichloropropane	ND	(ug/L)	2.0	1
Vinyl Chloride	ND	(ug/L)	2.0	1
Surrogates:			Rec. Limits	
Dibromofluoromethane	93.8	% Recovery	78.6-115	1
1,2-Dichloroethane-d4	94.8	% Recovery	74.6-123	1
Toluene-d8	92.9	% Recovery	84.2-115	1

ND = Parameter not detected at the stated detection limit.

References:

4-Bromofluorobenzene

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass

Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

94.9

Comments:

QA/QC for samples 25915 - 25918.

Analyst

Mistine Mullers
Review

% Recovery

78.6-115



Client: Sample ID: QA/QC

Matrix Spikes

Laboratory Number:

Trichloroethene (TCE)

06-17-VOA - 25915

Sample Matrix: Preservative:

Water

Condition:

N/A

ND

100.0

N/A

Project #:

N/A

Date Reported:

06-17-03

Date Sampled: Date Received: N/A

Date Analyzed:

N/A 06-17-03

Analysis Requested:

76.1 - 126

8260 VOC

1.0

Spike		Units: uG/L	•		Recovery	Det.	
Analyte	Sample	Added	Result	%Recovery	Limits	Limit	
Benzene	ND	100.0	99.9	99.9%	85.3 - 120	1.0	
Toluene	ND	100.0	99.9	99.9%	73 - 123	1.0	
Chlorobenzene	ND	100.0	99.6	99.6%	84.7 - 119	1.0	
1,1-Dichloroethene	ND	100.0	99.5	99.5%	83.4 - 122	1.0	

99.6

99.6%

Spike Duplicate		Units: uG/L	-		Recovery	Det. Limit	
Analyte	Sample	Added	Result	%Recovery	Limits		
Benzene	ND	100.0	99.9	99.9%	85.3 - 120	1.0	
Toluene	ND	100.0	99.8	99.8%	73 - 123	1.0	
Chlorobenzene	ND	100.0	99.7	99.7%	84.7 - 119	1.0	
1,1-Dichloroethene	ND	100.0	99.6	99.6%	83.4 - 122	1.0	
Trichloroethene (TCE)	ND	100.0	99.6	99.6%	76.1 - 126	1.0	

ND = Parameter not detected at the stated detection limit.

References:

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass

Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Comments:

QA/QC for samples 25915 - 25918.

Analyst

Mistane m Walters Review



EPA Method 8260B Volatile Organic Compounds by GC/MS Daily Calibration Report

Client: Sample ID: QA/QC

Project #:

Date Received:

N/A

Campic ID.

Daily Calibration 06-17-VOA

Date Reported: 06-17-03

Laboratory Number:

Date Sampled:

N/A

Sample Matrix: Preservative:

Water

N/A

Condition:

N/A N/A Date Analyzed: Analysis Requested: 06-17-03 8260 VOC

	Concentration		% Recovery		
Parameter	(ug/L)	Result	Result % Recoverd		
Benzene	100	99.8	99.8	80 - 120	
Toluene	100	99.8	99.8	80 - 120	
Ethylbenzene	100	99.3	99.3	80 - 120	
Xylenes, Total	100	99.6	99.6	80 - 120	
Methyl tert-butyl ether (MTBE)	100	99.1	99.1	80 - 120	
1,2,4-Trimethylbenzene	100	99.1	99.1	80 - 120	
1,3,5-Trimethylbenzene	100	99.0	99.0	80 - 120	
1,2-Dichloroethane (EDC)	100	99.4	99.4	80 - 120	
1,2-Dibromoethane (EDB)	100	99.7	99.7	80 - 120	
Napthalene	100	99.8	99.8	80 - 120	
1-Methylnapthalene	100	99.6	99.6	80 - 120	
2-Methylnapthalene	100	99.4	99.4	80 - 120	
Bromobenzene	100	99.3	99.3	80 - 120	
Bromochloromethane	100	99.6	99.6	80 - 120	
Bromodichloromethane	100	99.4	99.4	80 - 120	
Bromoform	100	99.5	99.5	80 - 120	
Bromomethane	100	99.8	99.8	80 - 120	
Carbon Tetrachloride	100	99.6	99.6	80 - 120	
Chlorobenzene	100	99.8	99.8	80 - 120	
Chloroethane	100	99.5	99.5	80 - 120	
Chloroform	100	99.2	99.2	80 - 120	
Chloromethane	100	99.3	99.3	80 - 120	
2-Chlorotoluene	100	99.2	99.2	80 - 120	
1-Chlorotoluene	100	99.1	99.1	80 - 120	
cis-1,2-Dichloroethene	100	99.4	99.4	80 - 120	
cis-1,3-Dichloropropene	100	99.2	99.2	80 - 120	
1,2-Dibromo-3-chloropropane	100	99.1	99.1	80 - 120	
Dibromochloromethane	100	99.0	99.0	80 - 120	
Dibromoethane	100	99.2	99.2	80 - 120	
1,2-Dichlorobenzene	100	99.3	99.3	80 - 120	
1,3-Dichlorobenzene	100	99.6	99.6	80 - 120	
1,4-Dichlorobenzene	100	99.3	99.3	80 - 120	
Dichlorodifluoromethane	100	99.2	99.2	80 - 120	
1,1-Dichloroethane	100	99.6	99.6	80 - 120	
1,1-Dichloroethene	100	99.7	99.7	80 - 120	
1,2-Dichloropropane	100	99.4	99.4	80 - 120	
1,3-Dichloropropane	100	99.6	99.6	80 - 120	
2,2-Dichloropropane	100	99.3	99.3	80 - 120	



Client:

QA/QC

Sample ID:

Daily Calibration

Laboratory Number:

06-17-VOA

page 2

	Concentration	n		% Recovery
Parameter	(ug/L)	Result	% Recoverd	Limits
1,1-Dichloropropene	100	99.4	99.4	80 - 120
Hexachlorobutadiene	100	99.6	99.6	80 - 120
Isopropylbenzene	100	99.3	99.3	80 - 120
4-Isopropyltoluene	100	99.4	99.4	80 - 120
Methylene Chloride	100	99.5	99.5	80 - 120
n-Butylbenzene	100	99.3	99.3	80 - 120
n-Propylbenzene	100	99.1	99.1	80 - 120
sec-Butylbenzene	100	99.4	99.4	80 - 120
Styrene	100	98.9	98.9	80 - 120
tert-Butylbenzene	100	99.4	99.4	80 - 120
Tetrachloroethene (PCE)	100	99.6	99.6	80 - 120
1,1,1,2-Tetrachloroethane	100	99.4	99.4	80 - 120
1,1,2,2-Tetrachloroethane	100	98.9	98.9	80 - 120
trans-1,2-Dichloroethene	100	99.3	99.3	80 - 120
trans-1,3-Dichloropropene	100	99.5	99.5	80 - 120
Trichloroethene (TCE)	100	99.4	99.4	80 - 120
Trichlorofluoromethane	100	99.3	99.3	80 - 120
1,2,3-Trichlorobenzene	100	99.6	99.6	80 - 120
1,2,4-Trichlorobenzene	100	99.3	99.3	80 - 120
1,1,1-Trichloroethane	100	99.5	99.5	80 - 120
1,1,2-Trichloroethane	100	99.7	99.7	80 - 120
1,2,3-Trichloropropane	100	99.5	99.5	80 - 120
Vinyl Chloride	100	99.3	99.3	80 - 120
Surrogates:		7 TAX III III A A A A A A A A A A A A A A A	Rec. Limits	
Dibromofluoromethane	101.0	% Recovery	78.6-115	
1,2-Dichloroethane-d4	102.9	% Recovery	74.6-123	

Surrogates:		Rec. Limits				
Dibromofluoromethane	101.0	% Recovery	78.6-115			
1,2-Dichloroethane-d4	102.9	% Recovery	74.6-123			
Toluene-d8	100.1	% Recovery	84.2-115			
4-Bromofluorobenzene	98.9	% Recovery	78.6-115			

ND = Parameter not detected at the stated detection limit.

References:

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, July 1992.

Method 8260, Volatile Organic Compounds by Gas Chromatography / Mass

Spectrometry, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Comments:

QA/QC for samples 25915 - 25918.

Mistené m Walles

CHAIN OF CUSTODY RECORD

ANALYSIS / PARAMETERS	Remarks							Date Time			Sample Receipt	A N N/A	Received Intact	Cool - Ice/Blue Ice
ANALYSIS /	o. of siners		7	> ~	7	2		nived by: (Signature)	Received by: (Signature)	Received by: (Signature)	CHIC		hway 64 Jexico 87401	0615
CK, NR) 00-	Sample Matrix	H20	1490	H20	H20		Date Time Receive		Rece	ENVIROTECH INC		5796 U.S. Highway 64 Farmington, New Mexico 87401	(505) 632-0615
Project Location Shiprock, NW	Olient No.	Lab Number	35915	31356	25917	35913		9			ш			
4	4	Sample Sample Date Time	6/16/03 1138	6/16/03 1131	0h01 80/01/9	6/10/03 1120		ture)	ture)	ture)				
Bond + Bond	Sampler: CSC+ KPK	Sample No./ Identification	MW-1	アーコン	N-72	MW-6		Relinquished by (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)				

ENVIROTECH INC. FARMINGTON, NM 5796 HIGHWAY 64 MONITOR WELL DATA

						K MELL					
Date:	<u>ta-</u>	16-03	7				P	roject	No: 🖒	2148-	021
Projec	t Name:	Bon	JY B	~ P_	_		Chain	of Cust	ody No	:	
Locati	on: <u>\$</u> t Manag	hypor	ench)				····			
Projec	t Manag	er: _	Cse	D-	(Sa	mpler:	<u>Jeps</u>		
					MONITO	R WELL	DATA				
WELL #	TIME	DDw DDw	рН	ND.	TEMP.	DEPTH TO WATER FT.	TOTAL DEPTH FT.	WATER COLUMN FT.	BAILED Water Gal.	PRODUCT Ft.	WATER LEVEL FT.
Mw-7	1023					8.60	8,90				
MWS	1040					11.90	14,30	2.40	1,20		
mw6	420					10,63.		2.52	1-70		
MW-4	1131					10.96	3	1.69	مرين	· .	
MW-1	1138	ļ				11.35		1.55			
	1140					dry	6.7'				
	1115		<u> </u>		<u> </u>	oug!	611				
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otes: sailed	TOC = To = 3 well	volumm 1. 2. 4.	es: 25" w 00" w	ell = 0. ell = 0. ell = 1. eter if	.49 gal .96 gal	/ft.	above.				